BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF: )
)
AMENDMENTS TO 35 ILL. ADM CODE ) R89-16
PARTS 201, 211, and 215 )

Testimony of Dr. John C. Reed
on Proposed Amendments to
Correct Certain SIP Deficiencies
Identified by USEPA in Their
SIP Call Letter of June 17, 1988

December 7, 1989
Springfield, Illinois

My name is John Reed. I am a Professional Engineer registered in Illinois and Oklahoma. I hold the degrees of Bachelor of Science, Master of Chemical Engineering, and Doctor of Philosophy, all in Chemical Engineering. My degrees were awarded at the University of Illinois, the University of Delaware, and the University of Wisconsin, respectively. I am a member of the American Institute of Chemical Engineers, the American Chemical Society, and the American Association of Cost Engineers.

I am presently employed as supervisor of the Chemical and Petroleum Manufacturing Unit of the Air Quality Planning Section with the Illinois Environmental Protection Agency, Division of Air Pollution Control. I was the supervisor of the Technical Support Unit in the Air Quality Planning Section from December, 1976 to November, 1989. Before that, I was supervisor of the Review Unit of the Permit Section from December 16, 1971, to December, 1976.

The purpose of my testimony today is to explain the Agency's proposal concerning the correction of certain deficiencies identified in the Illinois volatile organic chemical regulations by USEPA in their SIP call letter to Michael J. Hayes, from David Kee dated June 17, 1988 ("SIP Call Letter"). In addition, I will explain one other deficiency included in the Agency's submittal which was identified after the SIP Call Letter.

The regulatory changes in the Agency's proposal correspond with those identified in Exhibit B of the Settlement Agreement. The corrections made are federally approvable and completely satisfy the deficiencies (see Federal Letter for each specific rule). My testimony will only identify the additional federal justification found in the Blue Book, CTGs, or other documents.*

Deficiency 1: Surface Coating Exemption (III-3(1))

The corrections to deficiency 1 in the SIP Call Letter are found in Sections 201.146(g), 215.206(a), 215.206(b), 215.206(c), and 215.206(d). The geographical area impacted is the six county Chicago area (Cook, DuPage, Kane, Lake, McHenry, and Will Counties) and the three county St. Louis area (Madison, Monroe, and St. Clair Counties) as well as one additional "downstate" county, i.e. Macoupin. Section 201.146(g) has been amended so that painting lines which use 5000 gallons per year or less will be required to have permits if they are subject to either the coating requirements in Subpart F or the miscellaneous fabricated product manufacturing processes in Subpart PP.

Section 215.206(a) has been amended so that the exemption for Reasonably Available Control Technology ("RACT") will be lowered from 25 tons per year for a coating plant to 15 pounds per day for each Central Technology Guideline ("CTG") grouping of coating lines. Wood furniture coating is not included in this change of exemption level since it is not a CTG category. Deficiency 1 in the SIP Call Letter, pages 2-2, 2-4, and 2-16 of the Blue Book, the January 25, 1989 Memorandum from Berkley Moore to Dennis Lawler, John Reed, Susan

*A listing of the documents referred to in my testimony can be found in the List of Justification Documents that is part of the Agency's proposal.

Schroeder, and Chris Romaine, and the June 9, 1989 Memorandum from G.T. Helms to the Chiefs of the various Regional Air Branches indicate that a state can choose either a 3 pound per day, 15 pound per day, or a 10 ton per year exemption level. Moreover, page 2-2 of the Blue Book and the January 25, 1989, Memorandum from Berkley Moore to Dennis Lawler, John Reed, Susan Schroeder, and Chris Romaine state that exemption levels shall apply to individual emission sources within the same CTG category.

Section 215.206(b) states that any coating line which has ever been subject to the limitations of Section 215.205 shall remain subject to Section 215.205 regardless of any subsequent reduction in emissions that would meet the exemption level. Justification for this revision can be found on page 2-2 of the Blue Book. Section 215.206(c) has been deleted since National Can Corporation no longer operates at its Loves Park location.

In the case of wood furniture, Section 215.206(d)(1) has been added to maintain the present exemption level of 25 tons per year for wood coating plants. Section 215.206(d)(2) has also been added so that any wood furniture coating line in Cook, DuPage, Kane, Lake, McHenry, Macoupin, Madison, Monroe, St. Clair, or Will County that has been subject to the limitation of Section 215.205 shall remain so in spite of any subsequent emission reductions that would meet the exemption. Again, justification for this revision can be found on page 2-2 of the Blue Book. Finally, a new Section 215.211(d) is added to give newly subject facilities one year from date of adoption to achieve compliance.

Deficiency 4(a): Fabric Coating Definition (III-3(3-1))

The "Fabric Coating" definition in Section 211.122 has been revised to clarify that coating operations include the saturation of the substrate. The geographical area impacted by this revision is statewide.

Although page 2-7 of the Blue Book only states that United States Environmental Protection Agency ("USEPA") regions are to make SIP calls on state-specific definitional problems, deficiency 4(a) in the SIP Call Letter and Appendix D of the Federal Register Notice of November 24, 1987 (52 Fed. Reg. 45108), state that fabric coating should cover saturation operations as well as coating operations.

Deficiency 4(b): Paper Coating Definition (Ill-3(3-2))

The correction to deficiency 4(b) is found in Section 211.122. As in the case of deficiency 4(a), the "Paper Coating" definition has been revised to clarify that coating operations include the saturation of the substrate. The definition has also been modified to delete the word "material" so as to be consistent with the definition of "Coating" (see Deficiency 4(d) below). In addition, the definitions of "Coating Applicator" and "Coating Line" have been modified to delete the word "surface" to be consistent with the concept that more than the surface of a material may be involved in the coating operation. The geographical area impacted by the revisions is statewide.

Again, although page 2-7 of the Blue Book only states that USEPA regions are to make SIP calls on state-specific definitional problems, deficiency 4(b) in the SIP call letter and Appendix D of the Federal Register notice of November 24, 1987 (52 Fed. Reg. 45108), state that paper coating should cover saturation operations as well as coating operations.

Deficiency 4(c): Transfer Efficiency Definition (Ill-3(3-3))

The correction to deficiency 4(c) is found in Section 211.122. The definition of "Transfer Efficiency" has been revised to clarify that the basis is not a total coating volume basis but a coating solids basis. The geographical area impacted by this revision is statewide.

Again, although page 2-7 of the Blue Book does not specifically state how the definition of transfer efficeincy should be revised, Appendix D of the Federal Register Notice of November 24, 1987 (52 Fed. Reg. 45108) states that USEPA proposes to require that sources be allowed to seek credit for transfer efficiency improvements only if the SIP specifies a baseline transfer efficiency that is acceptable to USEPA. Moreover, deficiency 4(c) in the SIP Call Letter specifically states that the definition should be based on a coating solids basis rather than a total coating volume basis. In fact, the definitions for "Transfer Efficieincy" that are contained in 40 C.F.R. 60.451 (1988) and in the Glossary for Air Pollution Control of Industrial Coating Operations Second Edition, EPA-450/3-83-013R, December 1983, are based upon a coating solids basis.

Deficiency 4(d): Coating Definition (III-3(3-4))

The corrections to deficiency 4(d) are found in Sections 211.122 and 215.104. The main revision in Section 215.122 is the addition of the definition of "Coating". A coating includes materials applied to substrates for decorative, protective, or other functional purposes. The definition also contains some examples of coatings.

To be consistent with the definition of "Coating" the word "material" was deleted in the Section 211.122 definitions of "Can Coating", "Coil Coating", Large Appliance Coating", "Prime Coat", "Prime Surfacer Coat," and "Top Coat" as well as in the Section 215.104 definition of "Furniture Coating Application Line". In addition, to clarify that coating includes saturation of the substrate, the phrase "film of" has been deleted from the Section 211.122 definitions of "Prime Coat", "Prime Surfacer Coat", and "Top Coat". The geographic area impacted by the revisions is statewide.

Although page 2-7 of the Blue Book only states that USEPA regions are to make SIP calls on state-specific definitional problems, deficiency 4(d) in the SIP Call Letter and Appendix D of the Federal Register Notice of November 24, 1987 (52 Fed. Reg. 45108) state that coating should be defined to include functional as well as decorative and protective coatings.

Deficiency 4(e): Vinyl Coating Definition (III-3(3-5))

The definition of "Vinyl Coating" in Section 211.122 has been changed to exclude organisols and plastisols. The geographic impact of this change is statewide.

Again, although page 2-7 of the Blue Book does not provide guidance regarding the definition of vinyl coating deficiency 4(e) in the SIP Call Letter, Appendix D of the Federal Register Notice of November 24, 1987 (52 Fed. Reg. 45108), and the April 23, 1985 Memorandum from Gerald A. Emison to W. Ray Cunningham state that organisol and plastisol coatings cannot be used to bubble emissions from vinyl printing or topcoating.

Although, the Board has requested comments concerning the definition of "organisols" and "plastisols", the Agency is reluctant to develop definitions for the terms since any attempt to do so may be too constrictive or vague to meet the requirements of the SIP Call Letter. The Agency, however, does not think that it is necessary to define the terms since there is an industry-wide understanding of the meaning of each term and since definitions for the terms can be found in several chemical dictionaries.

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Deficiency 4(f): Automobile or Light Duty Truck Refinishing Definition (III-3(3-6))

The definition "Automobile or Light Duty Truck Refinishing" has been added to Section 211.122 to clarify the meaning of the term since it is used in the

Section 211.122 definition of "Miscellaneous Metal Parts and Products". The term should only apply to the repainting of used automobiles and light duty trucks. The geographic impact of this change is statewide. Again, although page 2-7 of the Blue Book fails to provide guidance regarding the required revision, deficiency 4(f) of the SIP Call Letter and Appendix D of the Federal Register Notice of November 24, 1987 (52 Fed. Reg. 45608), state that refinishing should be defined to include the painting of used equipment.

Deficiency 11: Petroleum Refinery Monitoring Program for Leaks (III-4(10))

The corrections to deficiency 11 are found in Sections 215.447(b)(1) and 215.447 (b)(2). The present exemption for any monitoring of inaccessible valves in Section 215.447(b)(1) is removed, and a new requirement that inaccessible valves be monitored at least once per year is added in new Section 215.447(b)(2). To make the provision for inaccessible valves enforceable, refineries are required to submit an annual notice to the Agency that identifies the inaccessible valves and the reason why these valves are inaccessible. Each refinery is also required to describe the testing procedures it will use to monitor the inaccessible valves. The geographic impact of these revisions is statewide.

Deficiency 11 in the SIP Call Letter states that inaccessible valves should not be exempt from all periodic monitoring requirements. Rather, the SIP call letter states that inaccessible valves should be subject to a least annual monitoring. This requirement is echoed on page 2-13 of the Blue Book.

It should be noted that the Agency definition for inaccessible valves differs from the definition that is used fo SOCMI plants (see Section 215.432). This is because the Agency realizes that refineries may need flexibility regarding the determination of what an inaccessible value is since

certain refineries may have equipment available (i.e. cherry pickers) that can reach more values or may have complex piping that would hinder accessibility to certain values. This consideration, however, does not preclude the use of the same definition as in Section 215.432 where it would reasonably apply.

Deficiency 13: Bulk Gasoline Plant Exemption (III-4(12))

The corrections to deficiency 13 are found in Sections 215.581(e)(2), 215.581(f)(1), 215.581(h), and 215.581(i). Both the "load in" and "load out" vapor balance system exemption requirements at bulk gasoline plants are changed to 4000 gallons per day as determined by a 30 day running average. In practice, this revision has little effect upon the current regulation since a 350,000 gallon per year exemption level for "load in" converts to a 1400 gallon per day exemption level (350,000/250 (5 days x 50 weeks)) and since a 1,000,000 gallon per year exemption level for "load out" converts to a 4,000 gallon per day exemption level (1,000,000/250). In fact, one should noted that the average exemption level would actually be increased in the case of "load out". The "load in" exemption level applies statewide. The "load-out" exemption level applies at bulk gasoline plants that are located either in Boone, Cook, DuPage, Kane, Lake, Madison, McHenry, Peoria, Rock Island, St. Clair, Tazewell, Will, or Winnebago Counties or distribute gasoline to gasoline dispensing facilities in counties that require "load in" vapor balance.

A new Section 215.581(h) is added to provide newly subject facilities one year from the date of adoption to come into compliance. Another new section, Section 215.581(i), provides that any bulk gasoline plant that is ever subject to Section 215.581 shall remain subject to the section. This is not a substantive change. It simply maintains the current effect of Section 215.581 with the time period for applicability and exemptions changed from an annual basis on a 3-year running average to a daily basis on a 30-day running average.

Deficiency 13 in the SIP Call Letter and page 2-18, Attachment 1, and Attachment 6 of the Blue Book state that there must be a 4,000 gallon per day exemption for throughput. Moreover, page 2-18 of the Blue Book provides for a 30 day rolling average and a "once-in-always-in" concept for applicability.

Deficiency 15: Solvent Metal Cleaning (III-5(24))

The correction to deficiency 15 can be found in Section 215.181. This Section has been revised to remove the exemptions for control and operating requirements for cold cleaner degreasers, open top vapor degreasers, and conveyorized degreasers in Cook, DuPage, Kane, Lake, McHenry, Will, Macoupin, Madison, Monroe, and St. Clair Counties. All cold cleaners will be subject to equipment design and operating requirements set out in Section 215.182. It should be noted that these provisions do not require add-on control equipment except as an alternative to certain requirements for freeboard height in Section 215.182(3). The provisions for addressing add-on control for open top vapor degreasers are similar to those for cold cleaning degreasers (see Section 215.183(b)(4)). For conveyorized degreasers, the need for add-on control would be determined by the area of the air/vapor interface. If this is larger than 2.0 square meters, add-on control is required (see Section 215.184(b)(5)). A new section 215.186 allows any newly subject source one year from the date of adoption to come into compliance.

Although deficiency 15 in the SIP Call Letter only states that Illinois solvent metal cleaning rule is not consistent with USEPA guidance, pages 2-14 and 2-24, and Attachments 1 and 6 of the Blue Book indicate that cold cleaner degreasers, open top vapor degreasers, and conveyorized degreasers in urban "nonattainment" areas should not be exempt from Sections 215.182 or 215.183.

Deficiency 18: SOCMI Inspection Program for Leaks (III-1(2-1))

The correction to deficiency 18 can be found in Section 215.432(a). This Section has been revised to change the current monitoring requirement of annual monitoring of components more the two meters above a permanent support surface to one requiring annual monitoring of components that require elevation of monitoring personnel more than two meters above a permanent support surface. The impacted geographical area of this revision encompasses the counties of Cook, DuPage, Lake, McHenry, Will, Madison, Macoupin, Monroe, and St. Clair.

Page 2-13 of the Blue Book states that inaccessible values are required to be monitored at least annually. The difficulty with the current regulation is that the definition of inaccessible valves in the current rules does not conform to that required by the CTG document "Guideline Series - Control of Volatile Organic Compound Leaks from Synthetic Organic Chemical and Polymer Manufacturing Equipment, EPA-450/3-83-006 (March 1984). Page 3-16 of that document states that certain valves may be monitored annually if the monitoring of those valves would require the use of scaffolding or would require the elevation of monitoring personnel higher than two meters above permanent support surfaces.

This concludes my prepared testimony. I will be happy to answer any questions that you may have with regard to my testimony.

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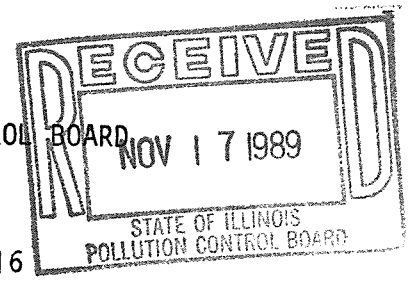
BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

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| IN THE MATTER OF: | ) | |
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| RACT Deficiencies - | ) | R 89-16 |
| Amendments to 35 Ill. Adm. | ) | |
| Code Parts 201, 211 and 215 | ) | |

Testimony of Christopher Romaine
Proposed Revisions Related to Test Methods and Procedures
Proposed Revisions Related to the "Generic Rule"

December 7, 1989
Springfield, Illinois

My name is Christopher Romaine. I am here today for the Illinois Environmental Protection Agency, by whom I am employed as Manager of the New Source Review Unit of the Permit Section of the Division of Air Pollution Control.

I have a Bachelor of Science Degree in Engineering from Brown University and have completed coursework toward a Masters Degree in Environmental Engineering from Southern Illinois University. I am a Professional Engineer.

I joined the Illinois Environmental Protection Agency (Agency) in June 1976, at a junior level position in the Permit Section in the Division of Air Pollution Control. I reached my present position in 1984.

As manager of the New Source Review Unit, I have programmatic responsibility for permitting activities related to certain federal or federally derived rules for new or modified sources. These rules include New Source Performance Standards, (40 CFR Part 60), Prevention of Significant Deterioration of Air Quality (40 CFR 52.21), and Major Stationary Sources Construction and Modification (35 Ill. Adm. Code Part 203). I serve as a lead worker for permitting associated with these regulatory programs, assisting analysts in their work on permit applications and reviewing their work. I am also responsible for coordination of Permit Section actions with the USEPA and program development. As time allows, I also process permit applications. Usually such applications pose particular complexity or demand extra resources so that it is more effective for me to handle them. For example, I processed the construction permit for the Diamond Star Motors automobile assembly plant in Normal, and continue to be involved with the series of compliance tests required to be performed prior to issuance of an operating permit.

As an employee of the Agency, I also perform other duties as assigned. In my case this has covered a number of tasks, both for the Permit Section and the Division of Air Pollution Control as a whole. In the regulatory arena, these other duties have included participation in several proceedings dealing with Reasonably Available Control Technology (RACT) for volatile organic material sources, including R82-14, "RACT III"; R86-12, "Definition of Volatile Organic Material"; R86-18, "The Generic Rule"; and AS88-1, "Adjusted Emissions Limitation for Viskase Corporation."

My testimony covers the portion of the Agency's proposal responding to two general areas of deficiencies identified by USEPA, namely test methods and the Generic Rule. The deficiency concerning test methods is referred to as Deficiency 9 in the SIP Call Letter and Ill-4(8) (Outstanding Illinois Deficiency 8) in Exhibit B of the Settlement Agreement. The Generic Rule is referred to as Deficiency 17 in the original Agency proposal. It was not identified by USEPA at the time the SIP Call Letter was prepared. The Generic Rule is referred to as Ill-2(6) (Unapprovable Rule Deficiency 6) in Exhibit B the Settlement Agreement. For the complete identification of the SIP Call Letter, the Settlement Agreement, and other documents referred to in this testimony, please refer to the List of Justification Documents accompanying the Agency's proposal.

Correction of the test method and Generic Rule deficiencies require a number of changes in the current rules. These changes are federally required. The Agency's formal justification for the federally required status of these proposed changes is found in the Certification accompanying the Agency's proposal. The proposed changes were also reviewed by the USEPA Region 5. Their findings are found in the Federal Letter, in which they

confirm that all the proposed changes are federally required. They also indicate that the proposed changes satisfy applicable requirements, so as to fully correct the deficiencies and be approvable by USEPA, with one exception. The one exception deals with applicability provisions of the Generic Rule, and I will discuss it later in my testimony. The Federal Letter specifically addresses Test Methods in two sections on page 5. One deals with Testing Methods for the Generic Rule; the other deals with Testing Methods elsewhere in Part 215. The Generic Rule is addressed in four sections, on pages 4 and 5 of the Federal Letter. Each section deals with a specific deficiency identified by USEPA.

A. TEST METHODS

Introduction - Test methods and procedures define the manner in which measurements to determine compliance with an emission limit or other control requirement shall be conducted. Provisions addressing testing are found throughout Part 215. In order for test measurements to be consistent and reliable, the methods and procedures for testing should be well-defined, standardized, and up-to-date. This objective is clearly stated in page 2-12 of the Blue Book, which states rules must use the most current test methods, all methods must be specified, and procedures should allow verification of test data. The SIP Call Letter states that "most current test methods are required." Numerous changes are proposed to the current rules to accomplish the basic objective that test methods and procedures be current.

As a general matter, the Agency believes that relevant test methods should be individually specified in each industry/equipment specific subpart in Part 215, that is, Subparts B through RR. The individual testing provisions should reference general provisions whenever possible for economy of rulemaking. In

this regard, the Agency considers the federal New Source Performance Standards (NSPS) to be the model for rule organization. In the NSPS, each equipment specific subpart includes sections addressing testing, monitoring, compliance procedures, records and reports as appropriate for the specific standards.

For this proposal dealing with testing, the Agency has focused its efforts on test methods and procedures. It is proposed that each emissions testing section include standardized language which: 1) specifies emission test method(s), (2) provides for testing upon request by the Agency, and 3) requires prior notice of testing to the Agency.

Because testing is an aspect of emission limitation, some changes go beyond simple updating of test methods and procedures. These changes are necessary to achieve other objectives set forth in the Blue Book. In particular, on page 2-14 of the Blue Book the USEPA addresses the necessary requirements for establishment of alternatives to SIP provisions. To the extent that emission limitations or other requirements are enforceable as part of a SIP, USEPA must generally approve any alternative to such provisions as a revision to the SIP. The only exception is if the SIP includes applicable generic provisions authorizing establishment of an alternative provision solely by the State. In order to satisfy this requirement in the Blue Book the Agency has proposed to eliminate certain provisions in the Board's rules which authorize the Agency to specify test methods or approve alternative emission limits.

In addition, at a very basic level it is important that the terms in which emission limitations are expressed and the associated test methods and procedures, as well as other compliance procedures, provide practical enforceability. There are a number of areas in the Board's rules, many of which are over 10 years old, which should be updated to improve enforceability.

My testimony addresses the individual changes which are proposed related to test methods "by topic". Starting from the beginning of the Agency's proposal, the testimony identifies the first change being made to respond to the test method deficiency. The testimony explains in general terms what the change is, why the change was made, and what the change does. If there are other sections in the Agency's proposal where identical or very similar changes are made, the testimony then lists these other sections. (If there are other changes, the general topic is identified in parenthesis in the heading). I then proceed to the next type of change being made to respond to the test method deficiency. This process continues until all the individual changes being proposed for the test method deficiency have been addressed.

1. Section 211.122 Definition of Volatile Organic Material Content

The first change that responds to the test method deficiency is a new definition for "Volatile Organic Material Content." This definition is proposed for inclusion in Section 211.122. The term "volatile organic material content" is used in and supports several sections dealing with the volatile organic material content of substances: Sections 215.208, 215.409, 215.467 and 215.614. The volatile organic material content of a coating or similar material is defined as the emissions of volatile organic material which would result from the use or release of the material without control equipment.

Volatile organic material content is typically associated with coatings. However volatile organic material content may also be relevant for certain materials which are not coatings, for example, dry cleaning wastes as addressed by Section 215.614.

2. Section 215.102(a) Testing Methods (Deletion of Test Procedures as "Approved by the Agency")

The next change relating to test methods is found in the General Provisions of Part 215 dealing with testing. The proposed revision deletes the use of test procedures as "approved by the Agency" for determination of compliance. The ability of the Agency under the current rule to approve an otherwise unspecified test method is inconsistent with USEPA's guidance both on test methods and unilateral State approval of exceptions (see pages 2-12 and 2-14 of the Blue Book, respectively.)

Other changes to Section 215.102(a) revising specified emission test methods are treated as a separate topic, distinct from the Agency's ability to generally approve alternative test methods.

The deletion of test procedures as "approved by the Agency" is a general objective of the Agency's proposal. Similar changes are proposed to the following sections. In all cases, other changes are required to add or revise the test methods, and these changes are treated as a separate topic later in my testimony.

- Section 215.124(a)(2)(b), (a)(6) and (a)(8)/Proposed Section 215.128 External Floating Roof Tanks
- Section 215.208(a) Testing Methods for Solvent Content (Coating Operations)
- Section 215.447(a)(1) and (2) Monitoring Program for Refinery Leaks
- Section 215.464(a) Emissions Testing for Rubber and Miscellaneous Plastic Products
- Present Section 215.582(b)/Proposed Section 215.585(a) Emissions Testing for Bulk Gasoline Terminals
- Section 215.603(c) Emissions Testing for Perchloroethylene Dry Cleaners

3. Sections 215.102(a) Testing Methods for Volatile Organic Material Emissions

Section 215.102(a) is revised to provide current methods for testing organic material and volatile organic material emissions. The section is expanded to include measurement of vent flow rate as well as concentration to address emissions in quantitative terms, i.e., kg/hour. The specified methods for measurement are all methods adopted or endorsed by USEPA. This section is referenced in Sections 215.127(a), 215.410(a), 215.464(a), 215.585(a), 215.615(a), 215.886(a), 215.928(a), 215.948(a) and 215.968(a).

4. Section 215.105 Incorporations by Reference

Section 215.105 is revised to update the edition or issuance date of certain materials incorporated by reference and to add three new items: American Society for Testing and Materials Methods D2504-83, D2382-83 and D4457-85.

The Agency calls to the Board's attention the failure to include in its Order, the 1981 version for ASTM D 2369, as proposed by the Agency. (See Section 215.105(a)(3).)

5. Section 215.122 Loading Operations (Deletion of Equivalent Control Requirements)

This section provides general requirements for loading of organic liquids into transport vehicles and storage tanks. (Handling of gasoline is addressed further in Subpart Y and handling of liquids in certain manufacturing operations is also addressed in various subparts). The section is revised to eliminate the Agency's authority to approve equivalent control measures which are not specifically identified in the rule. Appropriate test methods and

procedures can only be provided for the specific emission limitations and control requirements identified in the section. The current provision is inconsistent with USEPA's requirements both for test methods and for State approval of exceptions. (See pages 2-12 and 2-14 of the Blue Book, respectively.)

In addition, submerged fill (also known as bottom loading) has been specifically identified as an acceptable control measure. It is commonly accepted as being identical in effect to the use of a submerged loading pipe.

Similar changes are also proposed to the following sections to eliminate equivalent control requirements for which test methods cannot be specified:

- Section 215.124(a)(1)and (b)(3) - Equivalent control for external floating roof tanks
- Section 215.241(c) - Equivalent control for external floating roof tanks in major urbanized areas
- Section 215.601(a) - Equivalent control for perchloroethylene dry cleaning facilities

6. Section 215.124(a)(8), Section 215.127(b), and Section 215.128(b) Testing of External Floating Roof Tanks (Request by the Agency for Testing)

Present Section 215.124(a)(8) provides for formal demonstration of compliance for an external floating roof tank, upon a reasonable request by the Agency. The present provision is proposed to be deleted, and replaced by paragraph (b) in new Section 215.127 and Section 215.128. These proposed sections will address test methods and procedures. The wording of the new paragraph only addresses a request by the Agency for a formal demonstration of

compliance by testing. It does not address the method of testing or other means by which compliance or noncompliance with applicable limits might be determined.

Essentially identical wording is proposed for the following sections which address test methods and procedures:

- Present Section 215.404(a)/Proposed Section 215.410(b) Emissions Testing for Printing and Publishing
- Present Section 215.464(a)/Proposed Section 215.464(b) Emissions Testing for Rubber and Miscellaneous Plastic Products
- Section 215.585(b) Emissions Testing for Gasoline Distribution Facilities
- Section 215.615(b) Emissions Testing for Dry Cleaners
- Section 215.886(b) Emissions Testing for Polystyrene Plants
- Section 215.928(b) Emissions Testing for Miscellaneous Fabricating
- Section 215.948(b) Emissions Testing for Miscellaneous Formulating
- Section 215.968(b) Emissions Testing for Miscellaneous Organic Chemicals

7. Section 215.124(a)(8), Sections 215.127(c) and 215.128(c) Testing of Storage Tanks (Advance notice to the Agency for testing)

Present Section 215.124(a)(9) requires advance notice to the Agency for emissions testing to demonstrate compliance with Section 215.124 and a preceding section, Section 215.123. The present provision is proposed to be deleted. It is to be replaced by paragraph (c) in new Sections 215.127 and 215.128. These proposed sections address test methods and procedures. The new paragraph addresses advance notice for tests or measurements conducted to demonstrate compliance with Part 215 Subpart B, which includes control requirements in Sections 215.121 through 215.124.

One concern of USEPA with respect to testing is verification of the accuracy of data (see p. 2-12 of the Blue Book). Witnessing of tests by the Agency is a key element in such verification.

Essentially identical wording is proposed for the following sections which address test methods and procedures:

- Section 215.410(c) Emissions Testing for Printing and Publishing
- Section 215.464(c) Emissions Testing for Rubber and Plastic Products
- Section 215.585(c) Emissions Testing for Gasoline Distribution Facilities
- Section 215.615(c) Emissions Testing for Dry Cleaners
- Section 215.928(b) Emissions Testing for Miscellaneous Fabricating
- Section 215.948(b) Emissions Testing for Miscellaneous Formulating
- Section 215.968(b) Emissions Testing for Miscellaneous Organic Chemicals

8. Section 215.127(a) Emissions Testing for Storage and Loading Operations (Addition of emission test methods)

Part 215 Subpart B includes requirements for use of vapor recovery systems and control devices (Sections 215.121(b)(2); 215.122(b); and 215.123(a)(1) and (b)(1)). A new section is proposed, Section 215.127, to provide current test methods and procedures for determination of compliance with these requirements. The test method is provided in paragraph (a). Paragraph (a) refers to Section 215.102(a) as the subject is testing for organic material emissions.

Similar changes are proposed in the following sections to add current organic material or volatile organic material emissions test methods:

- Section 215.410(a) Emissions Testing for Printing and Publishing
- Section 215.464(a) Emissions Testing for Rubber and Plastic Products
- Section 215.585(a) Emissions Testing for Gasoline Distribution Facilities

- Section 215.615(a) Emissions Testing for Dry Cleaners
- Section 215.886(a) Emissions Testing for Polystyrene Plants
- Section 215.928(b) Emissions Testing for Miscellaneous Fabricating
- Section 215.948(b) Emissions Testing for Miscellaneous Formulating
- Section 215.968(b) Emissions Testing for Miscellaneous Organic Chemicals

9. Section 215.208(a) Testing Methods for Volatile Organic Material Content for Coatings (Test method for volatile organic material content)

Section 215.208(a) in Subpart F, Coating Operations is revised to specify current test methods for determination of volatile organic material content of various materials. The accepted methods are USEPA Method 24A for printing inks and USEPA Method 24 for other materials. An alternative test method may be used for certain materials other than inks if Method 24 is shown not to be representative, and the alternative method is demonstrated to be both representative and accurate.

The Agency's original proposal included a new definition for "Alternative Test Method," for inclusion in Section 211.122. This term was used in and supported Section 215.208. The new definition was derived from USEPA's definition of "Alternative Method" for New Source Performance Standards, 40 CFR 60.2, and described a test method which in a particular case was adequate to determine compliance. The Board has proposed, at least conceptually, to substitute a direct reference to 40 CFR 60.2 in the provisions in which the term appears. This is acceptable. It should be noted however that this concept was discussed by the Board in its opinion, but was not included in its order! Second, this term is used in Section 215.208(a) and Section 215.929,

so that a reference to 40 CFR 60.2 should be added in two sections. Finally, the USEPA term is simply "Alternative Method." These changes are incorporated in the Agency errata sheet, which is an exhibit in this proceeding.

Similar changes are proposed to the following sections to provide test methods for the volatile organic content of materials.

- Section 215.409 Volatile Organic Material Content for Printing and Publishing
- Section 215.467 Volatile Organic Material Content for Rubber and Miscellaneous Plastic Products
- Section 215.614 Volatile Organic Material Content for Dry Cleaning
- Section 215.929 Volatile Organic Material Content for Miscellaneous Fabricating

Changes to the above sections are necessary to provide a testing method for volatile organic content in each subpart where this determination may be required. The Agency believes it is inappropriate for provisions in one Subpart (for example, Subpart P, Printing and Publishing) which deals with determining volatile organic material content to be relied upon by another Subpart (for example, Subpart F, Coating Operations). This is supported by the minor but important technical differences in the selection of test method among the subparts. For example, provisions on coating operations in Subpart F need not address fountain solution, as used in certain printing operations subpart to Subpart P. It is also a reasonable approach in that associated recordkeeping and reporting requirements, which might be established through future rulemaking or as conditions to permits, may differ among subparts.

10. Section 215.404 Testing and Monitoring for Printing and Publishing (Absence of monitoring provisions)

Present Section 215.404 is proposed for deletion as it does not address monitoring. New Section 215.410, as already discussed in Topic 6 above, replaces Section 215.404 as it addresses emission testing.

Similar changes are proposed to the following sections:

- Section 215.464 Emission Testing for Rubber and Miscellaneous Plastic Products
- Section 215.610 Emission Testing for Dry Cleaners
- Section 215.886 Emission Testing for Polystyrene Plants

11. Section 215.421 General Requirements for SOCMI Leaks (Test method for volatile organic material leaks)

Section 215.421 is revised to specify the current test method for determination of whether a component is leaking. The accepted method is USEPA Method 21. For clarity, this method has been made into a separate paragraph, Section 215.421(b).

Similarly changes are made to Section 215.445 Leaks for Petroleum Refineries.

On page 5 of its Order, the Board raised certain questions concerning the leak detection test method. The measurement distance of 0 cm from the component was retained in the Agency's proposal for Section 215.421. This language was originally found in the rule and emphasizes the need to measure at the surface of a component. However, this measurement distance need not be stated, as measurement distance is also specified by the referenced USEPA test method, Method 21. As a technical matter, if Method 21 is specified it is

unnecessary to further specify a measurement distance in either Section 215.421 or 215.445. As a matter of consistency among Section 215.421, 215.445 and 215.430, the measurement distance of 0 cm, as found in Section 215.421, should be deleted, rather than added to Section 215.445.

In any event, the provisions for leaks for SOCMI plants outside Cook, DuPage, Kane, Lake, Macoupin, Madison, McHenry, Monroe, St. Clair or Will Counties, as addressed by Section 215.420 through 215.429, should include the current USEPA test method for leaks. Thus proposed Section 215.421(b) is needed.

12. Section 215.584(a)(6) Pressure-vacuum Test Method for Gasoline Delivery Vessels

Section 215.584(a)(6) is proposed to be revised to specify the current method for pressure-vacuum testing of delivery vessels. The accepted method is USEPA Method 27.

13. Section 215.601(b) and (g) Perchloroethylene Dry Cleaners

Section 215.601(b) and (g) are revised to clarify control requirements, so that compliance may be determined using specified methods for testing of emissions. In particular, the meaning of 90 percent average reduction in current Section 215.601(b) is uncertain, as an averaging period is not specified. Similarly, current Section 215.601(g) does not contain an explicit control requirement, for example, the meaning of "eliminate emissions" in Section 215.601(g) is unclear. The proposed changes eliminate this uncertainty by requiring use of control equipment for which compliance can be determined using standard USEPA Method 25 emission testing.

14. Section 215.602 Perchloroethylene Dry Cleaners - Exemptions

Section 215.602 is revised to clarify the exemption provisions by stating the exemption level only on a monthly basis.

The exemption is also altered by the addition of a provision that an emission source will continue to remain subject to Section 215.601 once it becomes subject to it. The need for a "once in, always in "provision is stated on page 2-2 of the Blue Book, dealing with CTG RACT Regulation applicability.

A related change is proposed to Section 215.606, Exception to Compliance Plan for Perchloroethylene Dry Cleaners.

15. Section 215.603 Perchloroethylene Dry Cleaners - Leaks (Inappropriate procedures for determination of compliance)

Section 215.603, previously entitled "Testing and Monitoring," is revised to address only leaking components. Other provisions are proposed for deletion, as they inappropriately circumscribe the means by which compliance may be determined. For example, the determination of the proper design and functioning of a carbon adsorption system, as required by Section 215.601(a), may entail review of equipment specifications, operating procedures, and solvent purchase and other operating records, as well as a simple visual inspection of the equipment itself.

Similar changes are proposed to Section 215.610, Compliance Procedures for Petroleum Solvent Dry Cleaners.

B. GENERIC RULE

Introduction - Illinois' "generic rule" was originally intended to be a generic catchall for major emission sources not otherwise regulated by Reasonable Available Control Technology (RACT). However the purpose of the rule changed during its development, and the generic rule is now four rules in Part 215. These rules apply to certain specific types of process emission sources as defined in Section 211.122. Accordingly, for the remainder of this testimony I will cease to refer to a "generic rule," and will instead refer to the specific rules which are involved.

The four rules are the following subparts in Part 215:

Subpart AA - "Paint and Ink Manufacturing"

Subpart PP - "Miscellaneous Fabricated Product Manufacturing Processes"

Subpart QQ - "Miscellaneous Formulation Manufacturing Processes"

Subpart RR - "Miscellaneous Organic Chemical Manufacturing Processes"

These rules apply to emission sources not otherwise regulated by Part 215, located in the following counties: Cook, DuPage, Kane, Lake, McHenry, Will, Macoupin, Madison, Monroe, and St. Clair.

These rules provide control requirements for certain individual emission sources for which the United States EPA has not published Control Technology Guidelines (CTG) describing RACT. In USEPA terminology, these rules are considered non-CTG sources. The Blue Book addresses the criteria which must be used to determine whether a non-CTG source must be subject to a RACT rule or not (see page 2-2). The Blue Book does not address substantive control requirements, as by definition, there are no CTGs which describe these requirements.

These rules have never been approved by USEPA as part of Illinois' State Implementation Plan (SIP). Following their submittal to USEPA on April 8, 1988, the USEPA prepared an "Initial Technical Support Document" (TSD) for these rules. It identified a number of deficiencies in the rules, and recommended their disapproval.

The Agency's proposal addresses four of the six deficiencies specifically identified by USEPA. The two deficiencies that are not addressed are the use of "potential to emit" for applicability determinations and USEPA approval of adjusted RACT determinations. As part of the Settlement Agreement, USEPA is now proceeding with the corrections to these two deficiencies as part of a Federal Implementation Plan. Obviously all deficiencies must be resolved to produce fully acceptable rules. At the same time, the correction of each individual deficiency has the potential to provide further reductions in volatile organic material emissions.

Because identical changes are being made, in most cases, to several Subparts, my testimony for these deficiencies will again be organized by topic.

1. Sections 215.620(b)(1), 215.920(b), 215.940(b) and 215.960(b) (Scope of CTG Rules)

To determine the applicability of Part 215, Subpart AA, PP, QQ and RR to a particular plant, the "uncontrolled" VOM emissions from process emission sources not regulated by RACT as addressed by a CTG must be determined. If these are 100 tons per year or more, a plant meets the applicability criteria of these rules. (On page 2-2, the Blue Book specifically states that a SIP must include RACT rules for plants which have 100 tons/year or more of non-CTG emissions.)

It should be kept in mind that for Illinois' rules a further step is needed to determine whether an individual emission source is subject to one of these rules. One must consider whether the emission source is covered under the definition of one of the categories of "miscellaneous manufacturing process" or is one of the specific paint and ink manufacturing operations addressed under Subpart AA. For example, an emission source in a pharmaceutical manufacturing process would not on its face qualify as one of the particular processes under the definition of Miscellaneous Organic Chemical Manufacturing Process. However the manufacture of a disinfectant would be covered.

Returning to eligibility for these rules at the level of the plant, the proposed revisions change applicability sections of the rules. The revisions alter the treatment of Part 215 Subparts N and U, and Section 215.408 to treat them as non-CTG rules. Thus, the emissions from any emission source subject to Subpart N or U, or Section 215.408 would contribute to the determination of whether non-CTG emissions at a plant are 100 tpy or more. (Subpart N covers Vegetable Oil Processing, Subpart U covers Coke By-Product Plants and Section 215.408 covers Heat Set Web Offset Printing.)

USEPA notes on page 3 of its TSD that "USEPA policy only allows regulated emissions from CTG sources to be excluded from counting toward a determination of whether a plant's non-CTG sources have the potential to emit 100 tons or more before control." This will increase the number of plants potentially subject to Part 215 Subparts AA, PP, QQ and RR.

The proper treatment of these rules was an issue that was mentioned in the original adoption of these rules. It was recommended by the Agency at that time, based in part on preliminary review by USEPA Region V, that these rules

should be considered CTG rules. (They were addressed by draft CTG documents.) It was recognized that this classification was uncertain. The proper classification has been made clear, and the rule must be corrected.

These proposed changes are the exception where USEPA has indicated that the proposed changes by themselves, will not result in rules which they can approve. This is because another deficiency in these Sections is the failure to use "potential emissions in the absence of control equipment" for determining whether a plant's non-CTG emissions are 100 tons/year or more. This is one of the identified deficiencies in these rules which USEPA will be correcting by federal promulgation. In the Federal Letter, USEPA makes the following statement with regard to the changes proposed by the Agency:

> The proposed revisions to 35 Ill. Adm. Code Sections 215.620(b)(1), 215.920(b), 215.940(b), and 215.960(b) fully satisfy the requirements outlined in the above-mentioned TSD, regarding basing applicability on emissions from all non-CTG categories. USEPA intends to make further corrections to the applicability section as it relates to applicability based on potential emissions. TSD, p.5

2. Section 215.626 (Additional sources at paint and ink plants)

New Section 215.626(a) requires use of pressure/vacuum conservation vents on tanks storing volatile organic liquid with a vapor pressure greater than 1.5 psi at 68F. New Section 215.626(b) requires a submerged-fill pipe or bottom fill for stationary volatile organic liquid storage containers with a capacity greater than 250 gallons.

Current Subpart AA, Paint and Ink Manufacturing is a melding of applicable VOM control requirements from several jurisdictions. Two of Jefferson County's requirements, applicable to VOM storage tanks and containers, were not included in Part 215, Subpart AA. In its review of Subpart AA, USEPA found this omission to be a deficiency (see page 6 of the TSD). The proposed revisions add these requirements as a new Section 215.626.

Conservation vents are valves installed on a fixed roof tank that operate under either pressure or vacuum to prevent the movement of vapors in or out of the tank during small changes in temperature, barometric pressure, or amount of material stored. To the extent that the valve is able to block vapor flow during such conditions, the tank operates as a pressure tank without direct emissions to the atmosphere. When sufficiently large changes in conditions occur, the valve opens to prevent damage to the tank, as tanks are designed to operate within a defined range of pressure and vacuum. Direct emissions to the atmosphere result if the tank is under pressure.

Bottom filling means filling a tank through an opening that is flush with the bottom of the tank. Submerged filling means the filling of a tank through a pipe or hose whose discharge is under the surface level of the liquid in the tank being filled. Both techniques are distinguished from splash loading, in which a liquid falls a significant distance through the air during filling, with turbulent mixing of liquid and air. Both submerged filling and bottom filling prevent the extended air-liquid contact and turbulent mixing which accompany splash loading, minimizing transfer of liquid volatile organic material to the vapor phase during filling of a tank.

3. Sections 215.920(d)(2), 215.940(d)(2) and 215.960(d)(2) (Exemption from control requirements based on applicability of certain other limits.)

These sections are proposed for deletion. As discussed on page 8 of its TSD, USEPA found these sections to be inappropriate. Without these sections, emission sources subject to the limits in 35 Ill. Adm. Code 230, 35 Ill. Adm.

Code 231, the Lowest Achievable Emission Rate pursuant to 35 Ill. Adm. Code 203, Best Available Control Technology pursuant to 40 CFR 52.21 (1987), or Section 9.4 of the Act will now be subject to control requirements of Subpart PP, QQ or RR if other applicability criteria of these subparts are met. This makes additional emission sources potentially subject to the control requirements in these rules. These control requirements might be more stringent than otherwise applicable limits as listed above.

4. Sections 215.920(e), 215.940(e), and 215.960(e) (Meaning of phrase "regulated by a rule")

The revised Sections provide that an emission source would only be considered regulated by a CTG rule if it is actually subject to control requirements of the CTG rule. Thus emission sources which are below the size, throughput, or emissions criteria, or meet a specific exemption of a CTG rule will now be considered in determining whether a plant's non-CTG emissions are 100 tons/year or more. The change makes additional plants potentially subject to Part 215, Subparts AA, PP, QQ and RR. This requirement is specifically stated on page 2-2 of the Blue Book. It is reiterated on page 8 of USEPA's TSD.

5. Sections 215.636(b), 215.926(b)(2), 215.946(b)(2) and 215.966(b)(2) (Compliance Dates)

These Sections provide that newly subject emission sources will have one year from the date of adoption of the revised sections to achieve compliance with applicable control requirements.

This concludes my prepared testimony. I am now ready to answer questions.

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